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Model-Based COTS Incorporation

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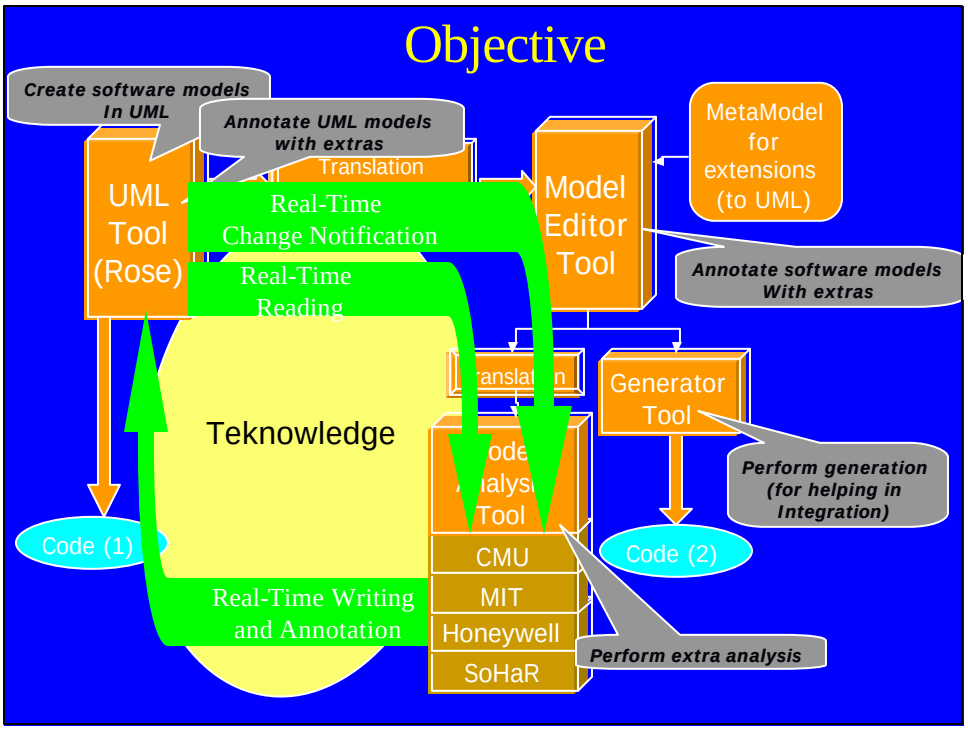
Evolution

Past MoBIES work was about

1) static integration between COTS and MOBIES tools (MoBIES XML Exporter)
2) Preparation for dynamic integration with proof of concept (MoBIES ACL Translator)

Future MoBIES work is about

1) Continuing support for static integration
2) Dynamic integration between COTS and *multiple* MoBIES tools



COTS Incorporation

Coordinated Integration of Multiple Third-Party Tools with COTS Tool

- **Coordinated COTS Incorporation**
- **Enhanced COTS Incorporation**

Coordinated COTS Incorporation

Integration Model

- Formalisms for data and invocation dependencies
- OEP-specific integration model

Automatic Extractor Generators

- Mechanism to extract data from COTS tool as relevant to single third-party tool (e.g., tailored change notification)

Automatic Configuration Generation

- Mechanism to automatically construct running instances of integration model (invocations)

Enhanced COTS Incorporation

Coordinated COTS Incorporation

- Locking Mechanism
- Extended Change Mechanism
- Undo Mechanism
- Access Permissions

Extended Semantics and Well-Formedness Checking

- Well-Formedness Checker
- Well-Formedness Resolver

Carnegie Mellon University

TimeWeaver

- Model data could be defined in Rose
  - Object data (sequence diagram)
  - State charts
  - Possibly tagged values to capture specific data
- Goal:
  - Find data representation in Rose
  - Integrate Rose and TimeWeaver with our interface
  - Enable analysis feedback to Rose
    - Temporary feedback (color highlighting)
    - Permanent feedback (changes to models)
  - Uncertain: incremental changes

Honeywell

DOME

- Model data defined in Rose
  - OEP data
  - Tagged values to capture specific data
- Goal:
  - Integrate Rose and Dome with our interface
  - Reason on incremental changes to Rose (consistency)
  - Uncertain: analysis feedback to Rose

SoHaR

FEMA (Failure Modes & Effects Analysis)

- Model data defined in Rose
  - Use Cases (not yet supported) with methods and dependencies
  - State charts
  - Possibly tagged values to capture specific data
- Goal:
  - Find data representation in Rose
  - Integrate Rose and SoHaR tool with our interface
  - Enable analysis feedback to Rose
  - Reason on incremental changes to Rose

Vanderbilt

GME

- Model data defined in Rose
  - OEP data
  - Tagged values to capture specific data
- Goal:
  - Integrate Rose and GME with our interface
  - Emphasis on consistency (incremental updates after initial download)
  - Uncertain: feedback to Rose for other third-party tools to consume

Questions?

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Contact us if you need access to any tools!

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